August 2009

[KV 072] **Sub. Code: 1501**

D.M. DEGREE EXAMINATION

(Higher Specialities)

Branch II - Cardiology

(Revised Regulations)

(Candidates admitted from 2006-2007 onwards)

Paper II – CLINICAL CARDIOLOGY

Q.P. Code: 161501

Time: Three hours **Maximum: 100 Marks**

Answer ALL questions

Draw suitable diagrams wherever necessary.

I. Essays: **2 x 20 = 40**

1. Discuss in detail the viability testing of the myocardium.
2. Discuss in detail RV (Right Ventricle) function assessment.

II. Write short notes on: **10 x 6 = 60**

1. Masked hypertension.
2. Criteria for the diagnosis of myocarditis.
3. Alcohol septal ablation.
4. Visceral heterotaxy.
5. Post operative TOF repair follow up.
6. Fontan sequalae.
7. Statins for aortic stenosis.
8. Pulmonary Hypertension – Classification.
9. Rheumatic tricuspid regurgitation – Management.
10. Infective endocardits prophylaxis.

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August 2011

[KZ 009] **Sub. Code: 1422**

DOCTORATE OF MEDICINE (D.M.) DEGREE EXAMINATION (SUPER SPECIALITIES)

BRANCH II – CARDIOLOGY

CLINICAL CARDIOLOGY

Q.P. Code: 161422

Time : 3 hours (180 Min) **Maximum : 100 marks**

Answer ALL questions in the same order.

I. Elaborate on :	**Pages (Max.)**	**Time (Max.)**	**Marks (Max.)**
1. Discuss the Clinical, Echocardiographic, Cardiac Catheterization features, in the diagnosis and management of Cardiac Pseudo Aneurysm with ST segment Elevation Acute Myocardial infarction.	11	35	15
2. Discuss the role of clinical examination, Echocardiography and Cardiac Catheterization in the modern management of Atrial Septal Defect.	11	35	15
II. Write notes on :			
1. Describe the pathogenesis of Opening Snap in the light of Echocardiography.	4	10	7
2. ECG manifestations of Acute Pericarditis.	4	10	7
3. Syndromes in Cardiology with Chromosomal Non Disjunction.	4	10	7
4. Clinical recognition of Focal Atrial Tachycardia.	4	10	7
5. Clinical, Electrocardiographic and Echocardiographic features of Down's syndrome.	4	10	7
6. Describe the mechanisms of genesis of third heart sound.	4	10	7
7. Torsades de pointes.	4	10	7
8. Treppe Phenomenon.	4	10	7
9. Normal pressure Tricuspid regurgitation.	4	10	7
10. Clinical diagnosis of Infective Endocarditis.	4	10	7

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February 2012

[LA 009] **Sub. Code: 1422**

DOCTORATE OF MEDICINE (D.M.) DEGREE EXAMINATION
(SUPER SPECIALITIES)

BRANCH II – CARDIOLOGY

CLINICAL CARDIOLOGY

Q.P. Code: 161422

Time: 3 hours **Maximum: 100 marks**
(180 Min)

Answer ALL questions in the same order.

I. Elaborate on :	**Pages (Max.)**	**Time (Max.)**	**Marks (Max.)**
1. Discuss the clinical, echo cardiographic, cardiac catheterization in the diagnosis and management of Cardiac Tampanade.	16	35	15
2. Discuss the clinical, echo cardiographic features of Infective endocarditis and their management.	16	35	15
II. Write notes on:			
1. ECG features of hyperkalaemia.	4	10	7
2. Differential diagnosis of extra cardiac sounds.	4	10	7
3. Bundle Branch Re entry Tachycardia.	4	10	7
4. Myocardial Performance Index.	4	10	7
5. Circulatory assist device in Heart failure.	4	10	7
6. Mechanism of linking of Diabetes to Cardio vascular disease.	4	10	7
7. Atheletic heart.	4	10	7
8. Abdominal aortic aneurysm.	4	10	7
9. Fontain patient.	4	10	7
10. Bio prosthetic valve.	4	10	7

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[LB 009] **AUGUST 2012** **Sub. Code: 1422**

D.M – CARDIOLOGY

Paper – II CLINICAL CARDIOLOGY

Q.P. Code: 161422

Time: 3 hours **Maximum: 100 marks**

(180 Min)

Answer ALL questions in the same order.

I. Elaborate on:	**Pages (Max.)**	**Time (Max.)**	**Marks (Max.)**
1. Discuss in detail post myocardial infarction risk stratification and management.	16	35	15
2. Endomyocardial disease-Discuss epidemiology,clinical presentation, diagnosis and management.	16	35	15

II. Write notes on:

1. Describe the aetiology of congenital heart disease.	4	10	7
2. Discuss sudden cardiac death in hypertrophic cardiomyopathy, its epidemiology, clinical presentation, identification of high risk group and management.	4	10	7
3. Discuss the cardiac risk indices in the assessment of noncardiac surgery patients.	4	10	7
4. Role of biochemical markers in patients with chest pain in the emergency department.	4	10	7
5. What is Commotio cordis and describe its clinical features and management.	4	10	7
6. Diagnosis of aortic pseudostenosis.	4	10	7
7. Describe echo evaluation of diastolic dysfunction.	4	10	7
8. Aetiology, clinical features, diagnosis and management of acute pulmonary embolism.	4	10	7
9. Describe in detail anticoagulation in atrial fibrillation.	4	10	7
10. Diabetic cardiomyopathy-Is it different from other cardiomyopathy? How?	4	10	7

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(LD 009) **AUGUST 2013** **Sub. Code:1422**

D.M. – CARDIOLOGY
Paper – II CLINICAL CARDIOLOGY
Q.P.Code: 161422

Time: Three Hours **Maximum: 100 marks**

I. Elaborate on: **(2X15=30)**

1. Vital role of various noninvasive cardiac imaging modalities in the diagnosis and management of heart failure.
2. Definition, causes, cardiac causes, classification, diagnosis and management of syncope.

II. Write notes on: **(10X7=70)**

1. Appropriate use criteria for computed tomography coronary angiography.
2. Usefulness of various cardiac imaging modalities to differentiate between ischemic and nonischemic causes of heart failure.
3. Value of echocardiography in the assessment ofr cardiac resynchronization therapy.
4. Inherited and acquired hypercoagulable states.
5. Sudden cardiac death survivors-role of coronary angiography and percutaneous coronary intervention.
6. Inflammation as a therapeutic target in heart failure-discuss.
7. “Well” diagnostic criteria.
8. Pathophysiology, clinical presentation, diagnosis and treatment of long RP tachycardia.
9. Cardiovascular abnormalities in HIV infection.
10. Causes and management of hyponatremia in heart failure.

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(LF 009) **AUGUST 2014** **Sub. Code:1422**

D.M. – CARDIOLOGY
Paper – II CLINICAL CARDIOLOGY
Q.P.Code: 161422

Time: Three Hours **Maximum: 100 marks**

I. Elaborate on: **(2X15=30)**

1. Discuss the etiology, diagnosis and management of Tricuspid valve disease
2. Elaborate on the etiopathogenesis and management of in-stent restenosis

II. Write notes on: **(10X7=70)**

1. Metabolic syndrome
2. Choice of prosthetic valve
3. CHADS2-Vasc. Score
4. Echocardiographic Assessment of ASD for device closure
5. Short QT Syndrome
6. Asplenia
7. Jone's criteria
8. Aorto- Pulmonary collaterals
9. Diagnostic Criteria of Arrhythmogenic Right Ventricular Dysplasia
10. Kawasaki Disease and Heart

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(LG 009) **FEBRUARY 2015** **Sub. Code: 1422**

D.M. – CARDIOLOGY

Paper II – CLINICAL CARDIOLOGY

Q.P.Code: 161422

Time: Three Hours **Maximum: 100 Marks**

I. Elaborate on: **(2 x 15 = 30)**

1. Diagnosis and management of Non Specific Aorto-arteritis.
2. Discuss the etiology, clinical presentation and management of Constrictive pericarditis.

II. Write notes on: **(10 x 7 = 70)**

1. Epsilon wave.
2. ECG changes in electrolyte abnormalities.
3. Anticoagulation in a pregnant woman with prosthetic valve.
4. Right sided Infective endocarditis.
5. Fascicular VT.
6. Renal Fibromuscular dysplasia.
7. Coarctoplasty.
8. Polysplenia syndrome.
9. Prophylaxis against Rheumatic fever.
10. Risk stratification of NSTEMI.

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(LH 009) **AUGUST 2015** **Sub. Code:1422**

D.M. – CARDIOLOGY

Paper II – CLINICAL CARDIOLOGY

Q.P.Code: 161422

Time: Three Hours **Maximum: 100 Marks**

I. Elaborate on: **(2 x 15 = 30)**

1. What are the long term complications of operated patients of common congenital heart diseases?
2. Discuss in detail about stages of heart failure with goals and treatment strategy for each. Discuss about recent trials in heart failure.

II. Write notes on: **(10 x 7 = 70)**

1. Genetics of HCM.
2. Newer lipid lowering guidelines.
3. Carotid artery disease management current status.
4. Crisscross heart.
5. Neuro developmental outcomes after heart surgery in children.
6. Triggering and timing of IABP.
7. Dialysis pericarditis.
8. Refractory heart failure.
9. Basics of speckled tracking.
10. Confidence interval.

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(LJ 009) AUGUST 2016 **Sub. Code:1422**

D.M. – CARDIOLOGY

Paper II – CLINICAL CARDIOLOGY

Q.P.Code: 161422

Time: Three Hours **Maximum: 100 Marks**

I. Elaborate on: **(2 x 15 = 30)**

1. Pulmonary Thrombo Embolism.
2. Polymorphic Ventricular Tachycardia.

II. Write notes on: **(10 x 7 = 70)**

1. Sinus Node dysfunction.
2. J wave syndrome.
3. Post operative Atrial Fibrillation.
4. Hemodynamic changes during pregnancy.
5. Orthostatic Hypotension.
6. Arterial smooth muscle cell in health and disease.
7. Unstable atheromatous plaque.
8. Electro Cardiography in Electrolyte abnormalities.
9. HDL cholesterol.
10. Dynamic Auscultation.

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(LK 009) FEBRUARY 2017 **Sub. Code:1422**

D.M. – CARDIOLOGY

Paper II – CLINICAL CARDIOLOGY

Q.P.Code: 161422

Time: Three Hours **Maximum: 100 Marks**

I. Elaborate on: **(2 x 15 = 30)**

1. Aortic Dissection. Etiology, classification, clinical features and management.
2. Conotruncal Anomalies.

II. Write notes on: **(10 x 7 = 70)**

1. Prosthetic Valve endocarditis.
2. Syndromes in Congenital Heart Disease.
3. Continuous murmurs in cardiology.
4. Acute mitral Regurgitation.
5. Cardiac Amyloidosis.
6. Risk stratification for sudden death in Hypertrophic Cardio Myopathy.
7. Cocaine and heart.
8. Jugular Venus Pulse in constrictive pericarditis. Restrictive cardio myopathy.
9. Obstructive sleep Apnea.
10. Kawasaki disease.

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(LL 009) AUGUST 2017 **Sub. Code:1422**

D.M. – CARDIOLOGY

Paper II – CLINICAL CARDIOLOGY

Q.P.Code: 161422

Time: Three Hours **Maximum: 100 Marks**

I. Elaborate on: **(2 x 15 = 30)**

1. Discuss in detail about pregnancy in mother with congenital heart disease including hemodynamics and management.
2. Discuss in detail about Tricuspid atresia.

II. Write notes on: **(10 x 7 = 70)**

1. Hypertensive ductus.
2. Broken heart syndrome.
3. Holmes heart.
4. Peripartum cardiomyopathy.
5. Mitral regurgitation - severity assessment.
6. Prediction and prevention of sudden cardiac death.
7. Surgical importance of mitral valve apparatus.
8. Phase 0 of action potential.
9. Rheumatic fever vaccination current status.
10. Diagnostic criteria for Arrhythmogenic Right Ventricular Dysplasia (ARVD).

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(LN 009) AUGUST 2018 **Sub. Code: 1422**

D.M. – CARDIOLOGY

Paper II – CLINICAL CARDIOLOGY

Q.P.Code: 161422

Time: Three Hours **Maximum: 100 Marks**

I. Elaborate on: **(2 x 15 = 30)**

1. What is cardiogenic shock and discuss the management of cardiogenic shock in the setting of acute MI?

2. Give an overview of Contrast Echocardiography.

II. Write notes on: **(10 x 7 = 70)**

1. Catecholaminergic polymorphic ventricular tachycardia.
2. Differential diagnosis of early diastolic added sounds in the heart.
3. Contrast-Induced Nephropathy.
4. Vijaya's Echo score.
5. Rentrop criteria.
6. Plant sterols in hyperlipidemia.
7. Atrial Function.
8. HAS-BLED Score.
9. Circadian Periodicity in Myocadial infarction.
10. Heart Failure with preserved ejection fraction.

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(LO 009) FEBRUARY 2019 **Sub. Code: 1422**

D.M. – CARDIOLOGY

Paper II – CLINICAL CARDIOLOGY

Q.P. Code: 161422

Time: Three Hours **Maximum: 100 Marks**

I. Elaborate on: **(2 x 15 = 30)**

1. Heart Failure with normal ejection fraction: Natural History, Pathophysiology, Clinical features, diagnosis and treatment.

2. Discuss the classification, clinical features, diagnostic criteria and recent management of active and chronic phases of Takayasu's arteritis.

II. Write notes on: **(10 x 7 = 70)**

1. Prevention of contrast Induced Nephropathy.
2. Coronary ectasia and aneurysm.
3. Roles of Cardiac Magnetic resonance Imaging in Myocardial Viability.
4. Vitamin D in cardiovascular disease: What is the role?
5. Rationale behind Non HDL Cholesterol and current recommendations.
6. Speckle tracking.
7. ECG identification of IRA.
8. Cor triatiratum.
9. Post fontan arrhythmia and management.
10. Magnetic resonance Imaging in Congenital heart Diseases.

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(LP 009) AUGUST 2019 **Sub. Code: 1422**

D.M. – CARDIOLOGY

Paper II – CLINICAL CARDIOLOGY

Q.P. Code: 161422

Time: Three Hours **Maximum: 100 Marks**

I. Elaborate on: **(2 x 15 = 30)**

1. Discuss the management of end stage heart failure.
2. Discuss the fontan physiology and describe the evolution and present status of fontan type surgeries.

II. Write notes on: **(10 x 7 = 70)**

1. Head up Tilt testing.
2. Quantification of infarct size.
3. Trans fatty acids and Coronary artery Disease.
4. Hs CRP and Lp(a) as risk factors: Current status.
5. Radiation safety in cardiac catheterization laboratory.
6. Clinical significance of RBBB and LBBB.
7. Angiographic views to delineate septal defects.
8. Cardiac dyssynchrony.
9. Congenital pulmonary vein stenosis.
10. Flow calculation in Bidirectional shunts.

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(LQ 009) FEBRUARY 2020 **Sub. Code: 1422**

D.M. – CARDIOLOGY

Paper II – CLINICAL CARDIOLOGY

Q.P. Code: 161422

Time: Three Hours **Maximum: 100 Marks**

I. Elaborate on: **(2 x 15 = 30)**

1. Assessment of inducible Ischemia after Acute Myocardial Infarction.
2. What are the different types of prosthetic valves, possible complications after prosthetic valve replacement and write briefly on the management of these complications?

II. Write notes on: **(10 x 7 = 70)**

1. Cardiac involvement in Systemic Lupus Erythematosus.
2. Valsalva maneuver.
3. Wandering pacemaker.
4. Wilkins Scoring System for Mitral Valvuloplasty.
5. Treppe Phenomenon.
6. Rheumatic chorea.
7. Cardiovascular complications of Cocaine use.
8. Amiodarone and Thyroid function.
9. Patients at increased risk for complications after Coronary Arteriography.
10. Infective endocarditis prophylaxis.

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(LR 009) NOVEMBER 2020 **Sub. Code: 1422**

(AUGUST 2020 SESSION)

D.M. – CARDIOLOGY

Paper II – CLINICAL CARDIOLOGY

Q.P. Code: 161422

Time: Three Hours **Maximum: 100 Marks**

I. Elaborate on: **(2 x 15 = 30)**

1. Discuss the clinical echo and cath features in diagnosis and management of ventricular septal rupture in ST elevation myocardial infarction.

2. Discuss the clinical & echo features of atrial septal defects with reference to device closure and its complications.

II. Write notes on: **(10 x 7 = 70)**

1. Pathogenesis of S3 in clinical cardiology.
2. Multifocal atrial tachycardia.
3. ECG in hyperkalemia.
4. Cardiac bioprosthetic valves.
5. ECMO (Extra corporeal membrane oxygenator.)
6. Myocardial performance index.
7. Pre requisites for Fontan surgery.
8. Diastolic dysfunction by ECHO.
9. Concepts of atrial fibrillation management.
10. JVP in constrictive pericarditis.

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(DM 0221) FEBRUARY 2021 **Sub. Code: 1422**

D.M. – CARDIOLOGY

Paper II – CLINICAL CARDIOLOGY

Q.P. Code: 161422

Time: Three Hours **Maximum: 100 Marks**

I. Elaborate on: **(2 x 15 = 30)**

1. Discuss in detail about second heart sound in health & disease.
2. Discuss the evaluation & management of cyanotic newborn.

II. Write notes on: **(10 x 7 = 70)**

1. Rheumatic Fever prophylaxis.
2. ECG localisation of coronary occlusion.
3. Dobutamine stress in valvular heart disease.
4. Angiographic views for left main disease.
5. Cardiac Troponins.
6. Assessment of operability in Septal Defects.
7. Pulsus Paradoxus.
8. Dynamic auscultation.
9. Heparin Induced Thrombocytopenia.
10. Accessory pathway localisation by ECG.

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(DM 0821) AUGUST 2021 **Sub. Code: 1422**

D.M. – CARDIOLOGY

Paper II – CLINICAL CARDIOLOGY

Q.P. Code: 161422

Time: Three Hours **Maximum: 100 Marks**

I. Elaborate on: **(2 x 15 = 30)**

1. Management of valvular heart disease in pregnancy.

2. Diagnosis and management issues in cardiovascular disease during the COVID 19 pandemic.

II. Write notes on: **(10 x 7 = 70)**

1. Management of deep vein thrombosis.
2. Residual cardiac risk.
3. Blood pressure variability and its determinants.
4. Cardiovascular effects of air pollution.
5. Arrhythmogenic right ventricular cardiomyopathy.
6. Role of MRI in cardiomyopathies.
7. Stress testing in valvular heart disease.
8. Pulmonary vasculature by X-Ray.
9. Collateral circulation in coarctation of aorta.
10. Benign tumors of the heart.

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THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[DM 0822] **AUGUST 2022** **Sub. Code :1422**

D.M. – CARDIOLOGY

Paper II – CLINICAL CARDIOLOGY

Q.P. Code: 161422

Time: Three Hours **Maximum: 100 Marks**

I. Elaborate on: **(2 x 15 = 30)**

1. What are the Restrictions on Drivers and Aircraft pilots with cardiac disease and advice?

2. Describe in Detail about Integrated, Evidence Based Approach to Heart Failure Patients.

II. Write notes on: **(10 x 7 = 70)**

1. Explain briefly how optimizing drug doses is done in clinical practice?
2. Diastolic sounds.
3. Wearable devices in cardiovascular medicine.
4. Role of handheld echocardiogram in this pandemic.
5. Interventions for altering intensity of cardiac murmurs.
6. Morphometric classification of pulmonary system.
7. Fasicular ventricular tachycardia.
8. Management of heart failure in neonates.
9. Cardiovascular diseases burden in South Asian countries.
10. Apical impulse.

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THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[DM 0124] **JANUARY 2024** **Sub. Code :1422**

D.M. – CARDIOLOGY

PAPER II – CLINICAL CARDIOLOGY

Q.P. Code: 161422

Time: Three Hours **Maximum: 100 Marks**

I. Elaborate on: **(2 x 15 = 30)**

1. Discuss in detail about pulmonary thromboembolism and its management.
2. Discuss the clinical features and management of Infective endocarditis.

II. Write notes on: **(10 x 7 = 70)**

1. Cardiac involvement in Systemic Lupus Erythematosis.
2. Diastolic dysfunction by echo.
3. Radiation hazards in cardiology.
4. Current concepts in heart failure management.
5. IMPELLA device.
6. Coronary artery aneurysm and ectasia.
7. Frank starling's law.
8. Holmes heart.
9. Visceral obesity.
10. Rheumatic fever prophylaxis.

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THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[DM 0824] **AUGUST 2024** **Sub. Code :1422**

D.M. – CARDIOLOGY

PAPER II – CLINICAL CARDIOLOGY

Q.P. Code: 161422

Time: Three Hours **Maximum: 100 Marks**

I. Elaborate on: **(2 x 15 = 30)**

1. Discuss in detail about prosthetic heart valves, possible complications after implantation and write briefly on the management of these complications.

2. Natural history of Chronic Coronary syndrome. How to approach Chronic Coronary syndrome?

II. Write notes on: **(10 x 7 = 70)**

1. Cardiovascular involvement in HIV.
2. Describe in detail about Cardiac myosin inhibitors.
3. Contrast induced AKI.
4. Currents concepts in AF management.
5. Extracorporeal Life support.
6. Spontaneous Coronary Artery Dissection.
7. Bowditch effect.
8. Crisscross heart.
9. Reverse cholesterol transport.
10. Infective endocarditis prophylaxis.

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THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[DM 0225] **FEBRUARY 2025** **Sub. Code :1422**

D.M. – CARDIOLOGY

PAPER II – CLINICAL CARDIOLOGY

Q.P. Code: 161422

Time: Three Hours **Maximum: 100 Marks**

I. Elaborate on: **(2 x 15 = 30)**

1. Etiology, diagnosis and management of tricuspid valve disease.
2. Etiology, diagnosis and management of sudden cardiac death.

II. Write notes on: **(10 x 7 = 70)**

1. Radio frequency ablation in VT.
2. Vasodilator beta blocker.
3. Twiddler syndrome.
4. Triple anti platelet therapy.
5. IVC filter.
6. Pacemaker Malfunction.
7. Contrast nephropathy.
8. Aspirin resistance.
9. Ventricular interdependence.
10. Genetics in HCM.

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